

REMARKS

Claims 1-49 are currently pending in the subject application and are presently under consideration. In this response, claims 1-2, 34-35, 46, and 48-49 have been amended as shown on pp. 2-14. No claims have been added or cancelled.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Objection to Claims 48 and 49

Claims 48 and 49 are objected to because of alleged informalities. In particular, the Examiner suggested amending the preamble in each of claims 48 and 49 from "A computer readable medium comprising" to ---- A computer readable medium *encoded with* computer executable instructions which executed by computer processor *configured* to perform a method comprising ----.

Applicants have amended claims 48 and 49 as suggested by the Examiner. Accordingly, Applicants respectfully request that this objection be withdrawn.

II. Rejection of Claims 1-7, 24-25, 34-40, 46, and 48 Under 35 U.S.C. §103(a)

Claims 1-7, 24-25, 34-40, 46, and 48 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over U.S. Patent Publication No. 2002/0167992 A1 to Das *et al.* ("Das") in view of U.S. Patent No. 6,665,309 B2 to Hsu *et al.* ("Hsu"), and further in view of U.S. Patent No. 5,513,183 to Kay *et al.* ("Kay"). It is respectfully submitted that Das either alone or in combination with Hsu and/or Kay does not obviate every limitation of the rejected claims. In particular, this rejection should be withdrawn for at least the following reasons.

Each of the rejected claims generally relate to efficiently processing shared sub-packets in a communication system. Without acquiescence to the Examiner's rejection, in the interest of expediting prosecution and clarifying the claimed subject matter, Applicants have amended independent claims 1, 34, 46, and 48. As amended, each of independent claims 1, 34, 46, and 48 recite similar aspects for utilizing a variable number of sub-slots for sharing sub-packets amongst a variable number of subscriber stations. For instance, claim 1 has been amended to recite *inter alia*:

“generating a first control channel comprising (a) an indicator that a sub-packet of a traffic channel is to be shared by a plurality of subscriber stations, the sub-packets comprising at least one slot, the slot comprising *a variable number of sub-slots*...and (b) parameters of the shared sub-packet of the traffic channel including a *variable number of subscriber stations* sharing the sub-packet of the traffic channel....”

Claim 1 has also been amended to further recite:

“generating at least one second control channel *only if the sub-packet is shared*, the number of second control channels *equal* to the variable number of subscriber stations sharing the sub-packet of the traffic channel....”

To this end, it should be noted that above mentioned novel aspects may be desirably implemented in any of several exemplary embodiments. For instance, in one such embodiment, the present invention utilizes the sub-packet structure defined in the 1xEV-DV proposal, but further divides the sub-packet granularity. (See Published Application, Paragraph 0052). Indeed, as illustrated in Fig. 4, an exemplary sub-packet structure comprises one or more slots, wherein each of the slots is further time-divided into sub-slots. (See Published Application, Paragraph 0053). Within such embodiment, the data to a subscriber station is provided in one or more of the sub-slots, wherein each subscriber station can use a number of sub-slots, and *the number of sub-slots for each of the subscriber stations utilizing each of the sub-packets can be different*. (See *Id.*). A novel efficiency is then achieved by *only transmitting a number of controls channels equal to the number of subscriber stations sharing the sub-packet*, wherein *the transmission occurs only when the sub-packet is shared*. (See Published Application, Paragraph 0059). Moreover, as recited in amended claim 1, a variable number of “secondary” control channels are generated, wherein *the variable number of secondary control channels is equal to the variable number of subscriber stations* sharing the sub-packet. Das, either alone or in combination with Hsu and/or Kay, fails to obviate at least these novel aspects.

Das Reference

According to the Examiner, as best understood by Applicants, neither Das nor Hsu disclose “at least one slot, the slot comprising at least a first and second sub-slot, the first sub-slot comprising a first data transmission, the second sub-slot comprising a second data transmission different than the first data transmission, and (b) parameters of the shared sub-packet of the traffic channel,” as recited in claim 1. (*See e.g.*, Final Office Action, p. 6). Applicants agree with the Examiner’s assertion and maintain that neither Das nor Hsu could therefore disclose “at least one slot, the slot comprising *a variable number of sub-slots*...and (b) parameters of [a] shared sub-packet of [a] traffic channel including a *variable number of subscriber stations* sharing the sub-packet of the traffic channel,” as recited in amended claim 1.

The Examiner further alleges that Das discloses “generating at least one second control channel, each of said at least one second control channel comprising (a) and identity of at least one subscriber station intended to share the sub-packet,” as recited in claim 1. (*See e.g.*, Final Office Action, p. 4). To this end, Applicants have amended claim 1 to further recite “generating at least one second control channel *only if the sub-packet is shared*, the number of second control channels *equal* to the variable number of subscriber stations sharing the sub-packet of the traffic channel.” Applicants respectfully submit that Das does not disclose this novel aspect for at least the following reasons.

Das is generally directed towards the transmission of signaling information in wireless communication systems. However, although Das discloses a secondary channel, the teachings of Das are limited to decoding the secondary channel and the contents therein. (*See e.g.*, Das, Paragraphs 0008-0009). Nowhere does Das disclose the circumstances under which the secondary channel should be generated, nor does Das disclose a particular number of secondary channels that should be generated. Moreover, Das does not disclose generating a second control channel *only if a sub-packet is shared*, nor does Das disclose the number of second control channels being *equal* to the number of subscriber stations sharing the sub-packet, as recited in claim 1.

Hsu Reference

Hsu does not cure the deficiencies of Das. As stated previously, Applicants agree with the Examiner’s assessment that Hsu does not disclose “at least one slot, the slot comprising at least a

first and second sub-slot, the first sub-slot comprising a first data transmission, the second sub-slot comprising a second data transmission different than the first data transmission, and (b) parameters of the shared sub-packet of the traffic channel,” as recited in claim 1. (See e.g., Final Office Action, p. 6). Therefore, as was also stated previously, Hsu could not disclose “at least one slot, the slot comprising *a variable number of sub-slots*...and (b) parameters of [a] shared sub-packet of [a] traffic channel including a *variable number of subscriber stations* sharing the sub-packet of the traffic channel,” as recited in amended claim 1.

Applicants further submit that Hsu does not disclose “generating at least one second control channel *only if the sub-packet is shared*, the number of second control channels *equal* to the variable number of subscriber stations sharing the sub-packet of the traffic channel,” as recited in amended claim 1. Hsu is generally directed towards a manner by which to facilitate efficient radio resource utilization, wherein sharing sub-packets is not disclosed. Indeed, because the concept of ‘sub-packets’ is not mentioned anywhere in Hsu, Hsu cannot disclose generating a second control channel *only if a sub-packet is shared*, nor can Hsu disclose the number of second control channels being *equal* to the number of subscriber stations sharing the sub-packet, as recited in claim 1.

Kay Reference

Applicants respectfully submit that Kay also does not cure the deficiencies of Das. For instance, Kay does not disclose “at least one slot, the slot comprising *a variable number of sub-slots*...and (b) parameters of [a] shared sub-packet of [a] traffic channel including a *variable number of subscriber stations* sharing the sub-packet of the traffic channel,” as recited in amended claim 1. Kay is generally directed towards the provision of telephone service over radio frequency links to mobile stations. Here, although Kay discloses a forward control (FC) slot divided into two sub-slots (See Kay, Column 11, lines 10-20), nowhere does Kay disclose dividing the FC slot into a variable number of sub-slots. Indeed, rather than providing the flexibility of dividing the FC slot into a variable number of sub-slots, Kay merely discloses dividing the FC into two sub-slots, wherein each sub-slot comprises a SYNC field and a data field. (See *Id.*). Furthermore, although Kay discloses that each data field of each sub-slot carries two messages that may be destined for the same or different mobiles (See *Id.*), Kay does not disclose “generating at least one second control channel *only if the sub-packet is shared*, the

number of second control channels *equal* to [a] variable number of subscriber stations sharing the sub-packet of the traffic channel," as recited in amended claim 1.

In view of at least the foregoing, it is readily apparent that Das either alone or in combination with Hsu and/or Kay fails to obviate at least the above mentioned novel aspects as recited in claim 1. Accordingly, it is respectfully requested that this rejection be withdrawn as applied to claim 1 (and claims 2-7 that depend there from), as well as independent claims 34, 46, and 48 (and claims 24-25, and 35-40 that depend there from) which recite aspects similar to claim 1.

III. Allowable Subject Matter

The Examiner has stated that claims 8-12, 13-23, 26, 27-33, 41-45, 47, and 49 are allowed. Applicants appreciate the Examiner's statement of allowance and submit that none of these claims have been amended via this response. Accordingly, these claims remain in condition for allowance.

CONCLUSION

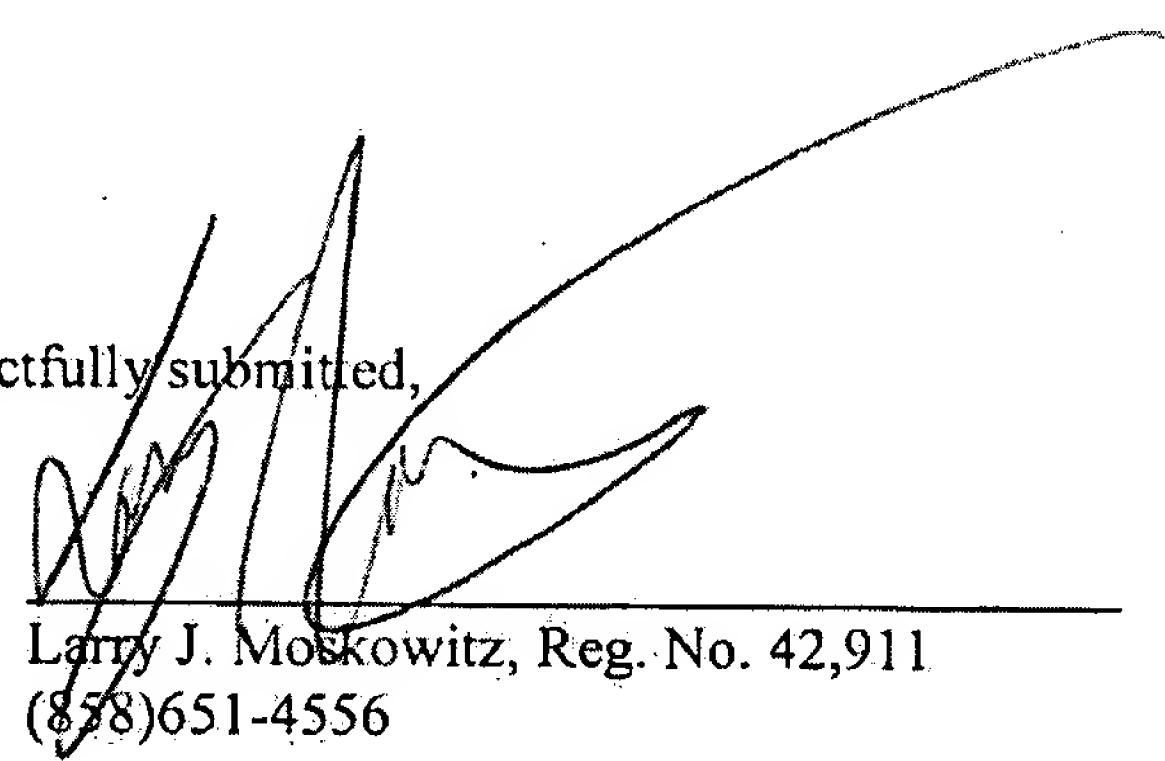
The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

Please charge any fees or overpayments that may be due with this response to Deposit Account No. 17-0026.

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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Dated: March 17, 2009

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